AIRPORTS AUTHROITY OF INDIA

ICAO Asia/Pacific Regional ATM Automation System Symposium

22-23th Nov 2018

R. R. Bassi, GM(CNS-P),AAI, India

AIRPORTS AUTHROITY OF INDIA

SYSTEM INTEROPERABILITY ISSUES BETWEEN ATM AUTOMATION SYSTEMS

ATC Automation in India

AAI HAS INSTALLED 44 ATM AUTOMATION SYSTEMS AT INDIAN AIRPORTS OF DIFFERENT MAKE :

- SELEX - 2Nos.
- RAYTHEON - 3 Nos.
- INDRA - 39 Nos.

❑ Objective of sharing data with ATC Automation systems:

- Enhanced Surveillance
- Effective co-ordination between adjacent ATC Centre
- Seamless control of Air Traffic operations
- Alternate site
- HMI – similarity in System functionality

- Reality
  - Systems are country specific- FAA/ Euro Control based
  - Stand-alone (high diversity)
  - Different (protocols)
  - Lack similar functionalities
  - No standard interfaces
  - Results in incoherent ATC systems

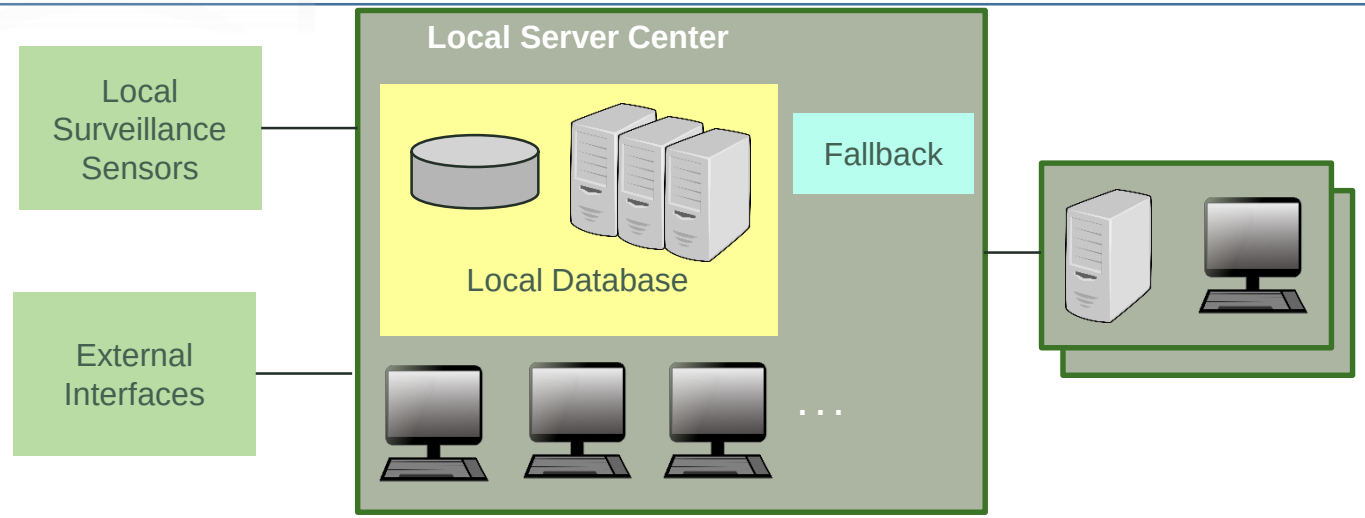
- ATM Automation system installed by Indra are sharing CAT 62 data with Indra Make System installed at other ATC Centre
- Alerts/conflict between targets processes by different ATM Systems are not generated
- Raw Surveillance data is required for generating Alert
- Sectorization /hand off of targets
- Flight Plan Data for synchronization
- AIDC Data – Transfer of control is not graceful/ non- standard ICD
- Recording of data is also an issue

❑ Challenges :

- ➢ Different Database Structure in different ATM System
- ➢ Transportation of Raw Video data
- ➢ Data Synchronization
- ➢ Real time update of Surveillance & FPL data
- ➢ Strong Telecommunication Infrastructure

❑ FUTURE PLANS:

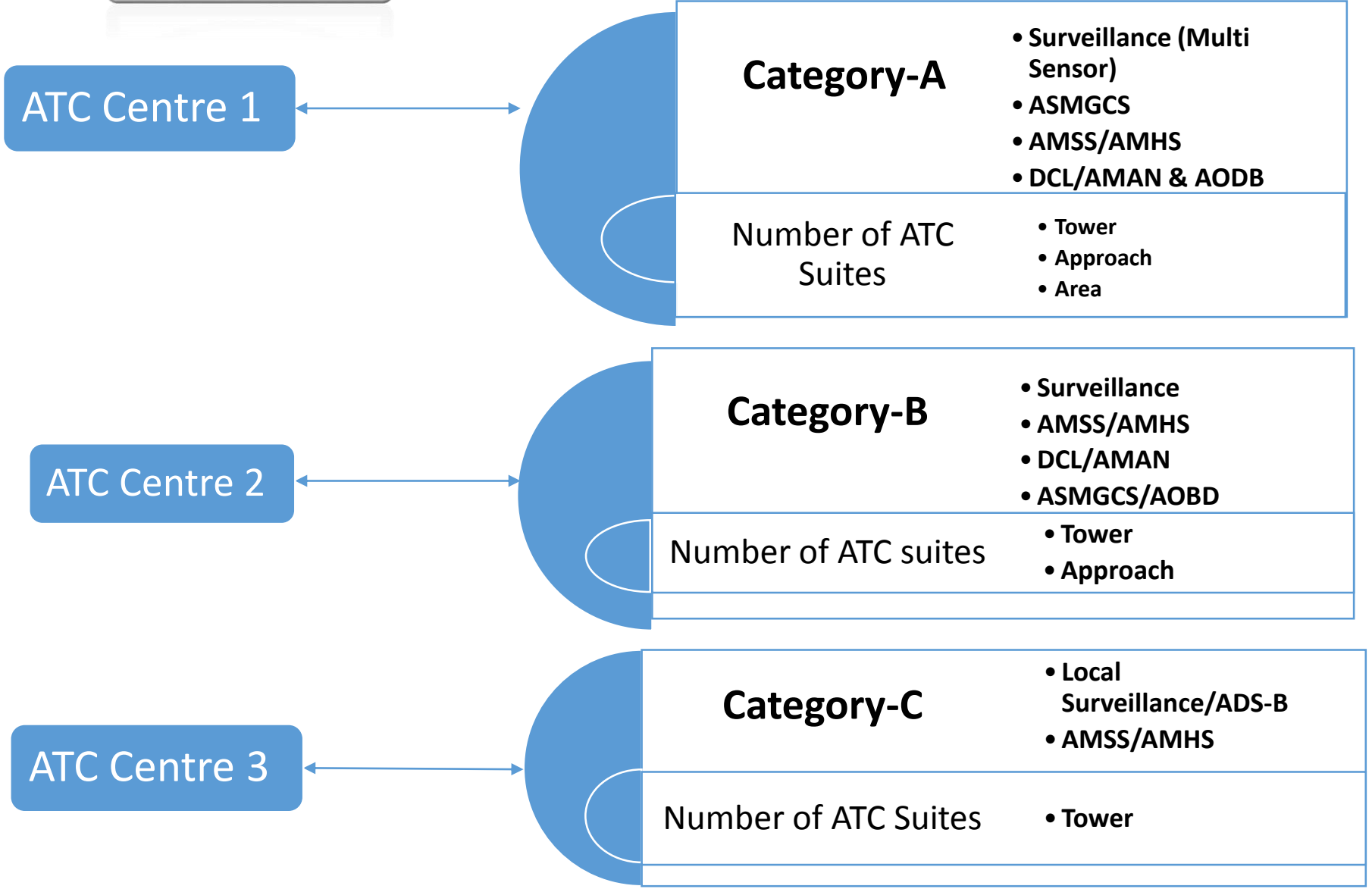
- Implementation of PAN India ATM Automation System
- An evolutionary **life-cycle management** process also ensuring **harmonisation** across users.
- Pan India system would employ same SW baseline, HMI & CNS/ATM training
- New sites added seamlessly, SW/HW upgrades to be done systematically
- Long term product roadmap defined in collaboration with Vendor
- Periodic software releases (approximately every 6-12 months) with the future functionalities as planned
- Optimised service agreement cost (development cost being shared by the systems) for the entire lifetime of the system.



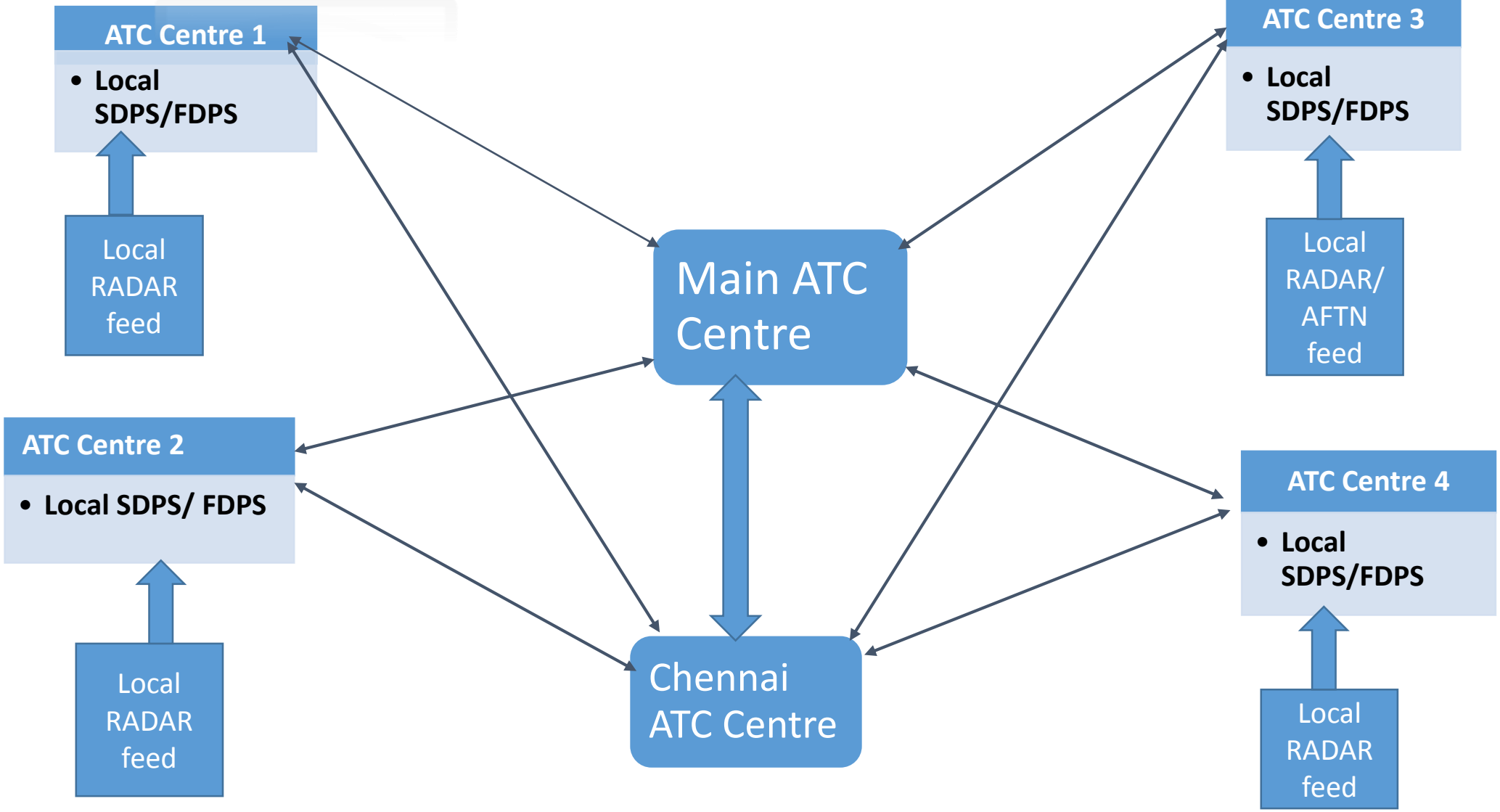
:

- **ATM Automation (Primary and Fallback)**
- **Adaptation Data**
- **Ancillary Systems**
- **Support Systems**
- **Simulator and Training Systems**
- **Software Builds**

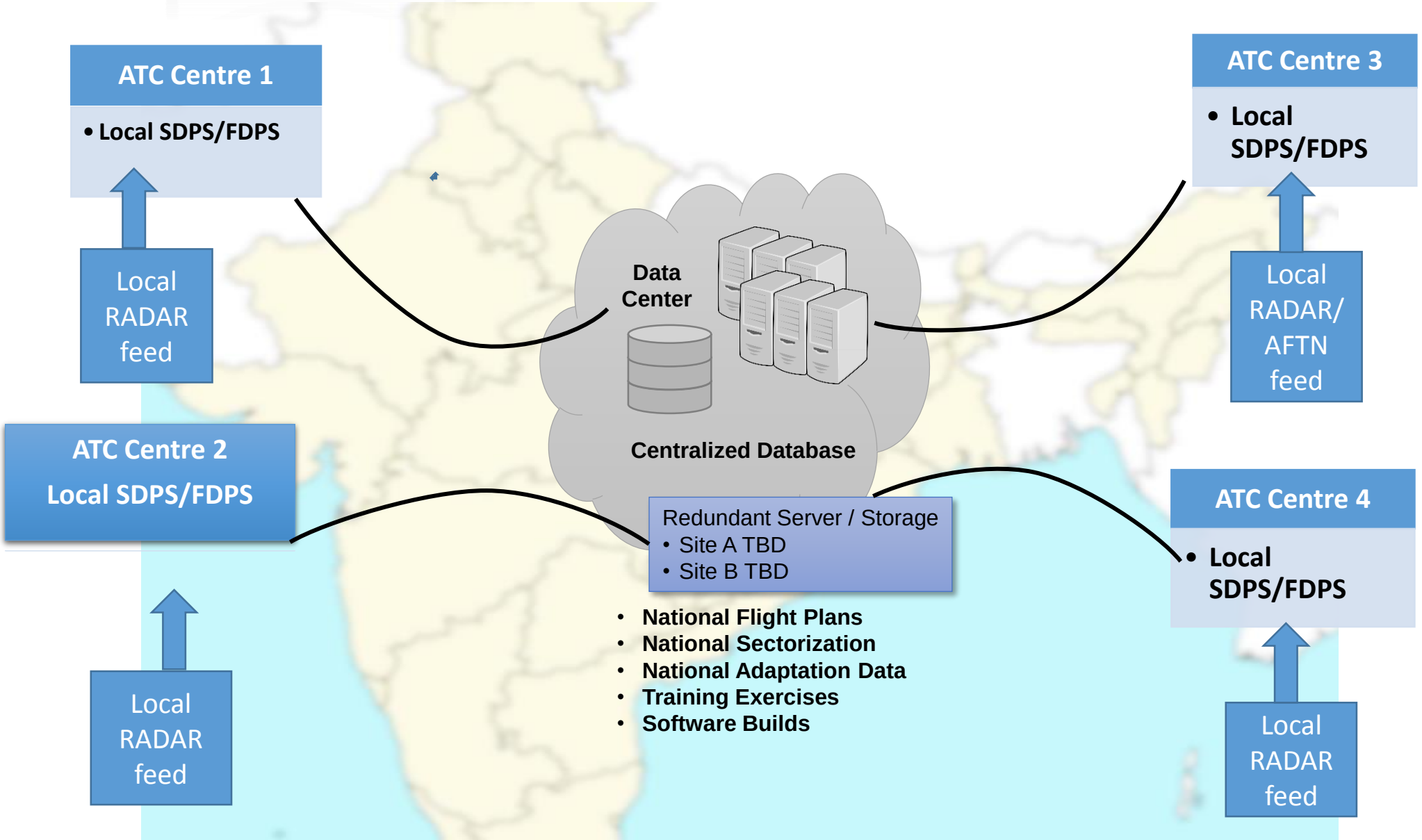
AIRPORTS AUTHORITY OF INDIA



AIRPORTS AUTHORITY OF INDIA



AIRPORTS AUTHROITY OF INDIA



ATC Automation in India

- **IMPEDIMENTS** :

  - ATM Automation System installed at different airports are in different phases of operational life-cycle.

  - Long term contract with single vendor on PAN India basis requires transparent cost component for future up gradation

THANK YOU